

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>339719/18010</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/IB 99/00282</b>	International filing date (day/month/year) <b>09/02/1999</b>	(Earliest) Priority Date (day/month/year) <b>09/02/1998</b>
Applicant <b>GENSET et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☒ Unity of invention is lacking (see Box II).

## 4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**CDNAS ENCODING SECRETED PROTEINS**

## 5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 99/ 00282

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Claims 1-20, all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## 1. Claims: Invention 1: Claims 1-20, all partially.

Nucleic acid comprising the sequence as in Seq.ID:40, complementary sequence or fragments, host cell containing said nucleic acid. Polypeptide as in Seq.ID:85, encoded by said polynucleotide, or fragments, method of making said polypeptide. Antibody specifically binding to said polypeptide.

## 2. Claims: Inventions 2-70: Claims 1-20, all partially, as far as applicable.

Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:41-84, 130-154, and corresponding polypeptides, where invention 2 is limited to Seq.ID:41 and 86, invention 3 is limited to Seq.ID:42 and 87,....., invention 45 is limited to Seq.ID:84 and 129, invention 46 is limited to Seq.ID:130 and 155,....., invention 70 is limited to Seq.ID:154 and 179.

For the sake of conciseness, the first subject matter is explicitly defined, the other subject matters are defined by analogy thereto.

## 3. Claims: Invention 71: Claims 21-28

A computer readable medium having stored thereon a sequence selected from the group consisting of Seq.ID:40-84, Seq.ID:130-154, Seq.ID:85-129 and Seq.ID:155-179. A computer system comprising a processor and a data storage device containing a sequence selected from the above Seq.IDs. Said computer system comprising a sequence comparer; said sequence comparer comprising a computer program which indicated polymorphism, or an identifier which identifies features in said sequence.

A method for comparing a first sequence to a reference sequence wherein said first sequence is selected from the group consisting of Seq.ID:40-84, Seq.ID:130-154, Seq.ID:85-129 and Seq.ID:155-179.

A method for identifying a feature in a sequence selected from Seq.ID:40-84, Seq.ID:130-154, Seq.ID:85-129 and Seq.ID:155-179.

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/IB 99/00282

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12 C07K14/47 C07K16/18 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N C07K C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 98 41628 A (ZYMOGENETICS INC. (US); SHEPPARD PAUL O.) 24 September 1998 (1998-09-24) Seq.ID:1,2 page 91 - page 93 abstract page 108 - page 113; claims page 4, line 12 - page 7, line 14 --- -/--	1-20



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

17 May 1999

Date of mailing of the international search report

31 08. 99

Name and mailing address of the ISA

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Macchia, G

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 99/00282

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E, L	<p>WO 99 06548 A (GENSET (FR); DUMAS MILNE EDWARDS J.-B.; DUCLERT A.; LACROIX B.) 11 February 1999 (1999-02-11) L: Priority abstract page 4, line 17 - page 12, line 29 page 30, line 1 - page 31, line 17 page 144 - page 148; claims Seq.ID:43 page 32 - page 33 Seq.ID:297 page 491 - page 492</p>	1-20
E, L	<p>WO 99 06550 A (GENSET (FR); DUMAS MILNE EDWARDS J.-B.; DUCLERT A.; LACROIX B.) 11 February 1999 (1999-02-11) L: Priority abstract page 4, line 17 - page 12, line 29 page 30, line 1 - page 31, line 17 page 130 - page 134; claims Seq.ID:49 page 36 - page 37 Seq.ID:57 page 42 - page 43 Seq.ID:327 page 364 - page 365 Seq.ID:335 page 369</p>	1-20
X	<p>Sequence Database EMBL, ID AA716150 Accession number AA716150 6 January 1998 99% identity with Seq.ID:40 nt.113-687 reverse orientation XP002102902 the whole document</p>	1,2,4,6, 7,9,10, 12-20
A	<p>WO 96 34981 A (GENSET (FR); NICOLAEVNA MERENKOVA I.; DUMAS MILNE EDWARDS J.-B.G.) 7 November 1996 (1996-11-07) cited in the application abstract</p>	
A	<p>EP 0 625 572 A (KANAGAWA ACAD OF SCIENCE AND TECHNOL FOUNDATION (JP); KATO S; SEKINE S) 23 November 1994 (1994-11-23) cited in the application abstract</p>	

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## INTERNATIONAL SEARCH REPORT

International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>CARNINCI P. ET AL.: "High-efficiency full-length cDNA cloning by biotinylated CAP trapper" GENOMICS, vol. 37, no. 3, 1 November 1996 (1996-11-01), pages 327-336, XP002081729 cited in the application abstract</p> <p>---</p>	
A	<p>KATO S. ET AL.: "Construction of a human full-length cDNA bank" GENE, vol. 150, 1994, pages 243-250, XP002081364 cited in the application abstract</p> <p>---</p>	
A	<p>WO 97 07198 A (GENETICS INSTITUTE INC (US); JACOBS K; MCCOY JM; KELLEHER K; CARLIN M) 27 February 1997 (1997-02-27) abstract</p> <p>---</p>	
A	<p>TASHIRO K. ET AL.: "Signal sequence trap: a cloning strategy for secreted proteins and type I membrane proteins" SCIENCE, vol. 261, 30 July 1993 (1993-07-30), pages 600-603, XP000673204 abstract</p> <p>---</p>	
A	<p>YOKOYAMA-KOBAYASHI M. ET AL.: "A signal sequence detection system using secreted protease activity as an indicator" GENE, vol. 163, 1995, pages 193-196, XP002053953 abstract</p> <p>---</p>	
A	<p>LOCKHART D.J. ET AL.: "Expression monitoring by hybridization to high-density oligonucleotide arrays" BIO/TECHNOLOGY, vol. 14, 14 December 1996 (1996-12-14), pages 1675-1680, XP002074420 abstract</p> <p>---</p>	18
A	<p>WO 96 33276 A (HUMAN GENOME SCIENCES INC; JOHNS HOPKINS UNIV (US); FLEISCHMANN ET AL.) 24 October 1996 (1996-10-24) abstract page 12, line 16 - page 17, line 7 page 78 - page 82; claims</p> <p>---</p>	

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## INTERNATIONAL SEARCH REPORT

International Application No

CT/IB 99/00282

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EP 0 786 519 A (HUMAN GENOME SCIENCES INC (US) KUNSCH CHOI BARASH DILLON FANNON ROSEN) 30 July 1997 (1997-07-30)  abstract  page 7, line 16 - page 9, line 3  page 3267 - page 3269; claims  ---</p>	
A	<p>EP 0 756 006 A (INST GENOMIC RESEARCH; JOHNS HOPKINS UNIV; NORTH CAROLINA UNIV (US)) 29 January 1997 (1997-01-29)  abstract  page 6, line 25 - page 8, line 2  page 744 - page 746; claims  ---</p>	
A	<p>ALTSCHUL S.F. ET AL.: "Basic local alignment search tool"  JOURNAL OF MOLECULAR BIOLOGY,  vol. 215, no. 9,  1 January 1990 (1990-01-01), pages  403-410, XP000604562  cited in the application  abstract  ---</p>	
A	<p>PEARSON W.R. AND LIPMAN D.J.: "Improved tools for biological sequence comparison"  PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA,  vol. 85, 1 April 1988 (1988-04-01), pages  2444-2448, XP002060460  cited in the application  abstract  ---</p>	
A	<p>HEIJNE VON G.: "A new method for predicting signal sequence cleavage sites"  NUCLEIC ACIDS RESEARCH,  vol. 14, no. 11, 1986, pages 4683-4690,  XP002053954  cited in the application  abstract  -----</p>	

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 99/00282

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9841628	A	24-09-1998	AU	6762498 A	12-10-1998
WO 9906548	A	11-02-1999	AU	8554798 A	22-02-1999
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WO 9634981	A	07-11-1996	FR	2733765 A	08-11-1996
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			EP	0851875 A	08-07-1998
			WO	9704097 A	06-02-1997
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			CA	2218741 A	24-10-1996
			EP	0821737 A	04-02-1998
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			JP	9252787 A	30-09-1997